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=> d que stat l32
L19           2 SEA FILE=REGISTRY ABB=ON  GLUCOSE/CN
L20           1 SEA FILE=REGISTRY ABB=ON  HEMOGLOBIN/CN
L21         757 SEA FILE=HCAPLUS ABB=ON  ?BLOOD?(W)?ANALYSIS? AND (?GLUCOSE?
                OR L19)(3A)(?CONTENT? OR ?LEVEL?)
L22         261 SEA FILE=HCAPLUS ABB=ON  L21 AND (?HAIR? OR ?URIN? OR (?BODY?
                OR ?INTERSTITIAL?)(W)?FLUID?)
L23           1 SEA FILE=HCAPLUS ABB=ON  L22 AND (L20 OR ?HEMOGLOBIN? OR
                RED?)(W)?LEVEL?
L24          21 SEA FILE=HCAPLUS ABB=ON  L22 AND (?LUMINESC? OR ?FLUORESENC?
                OR ?ELECTROCHEM?)
L25          22 SEA FILE=HCAPLUS ABB=ON  L23 OR L24
L26           3 SEA FILE=HCAPLUS ABB=ON  L25 AND ?TEST?(W)(KIT? OR ?STRIP?)
L27           0 SEA FILE=HCAPLUS ABB=ON  L25 AND ?HAIR?(3A)(?REMOV? OR
                ?DILUENT?)
L28           1 SEA FILE=HCAPLUS ABB=ON  L25 AND ?METABOL?(3A)?INHIBIT?
L29          22 SEA FILE=HCAPLUS ABB=ON  L25 OR L26 OR L27 OR L28
L32          14 SEA FILE=HCAPLUS ABB=ON  L29 AND (PRD<19970821 OR PD<19970821)

=> d ibib abs l32 1-14

L32  ANSWER 1 OF 14  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1998:484956  HCAPLUS
DOCUMENT NUMBER:          129:133369
TITLE:                    Microporation of tissue for delivery of bioactive
                          agents
INVENTOR(S):              Eppstein, Jonathan A.
PATENT ASSIGNEE(S):       Altea Technologies, Inc., USA; Eppstein, Jonathan A.
SOURCE:                   PCT Int. Appl., 168 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     WO 9829134            A2    19980709    WO 1997-US24127         19971230 <--
     WO 9829134            A3    19981015
         W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
             DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US,
             UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,
             FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,
             GA, GN, ML, MR, NE, SN, TD, TG
     EP 921840             A1    19990616    EP 1997-936041          19970703 <--
     EP 921840             B1    20030528
         R:  AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL,
             PT, SE
     JP 2000513971         T2    20001024    JP 1998-504488          19970703 <--
     AT 241405             E     20030615    AT 1997-936041          19970703 <--
     ES 2200187            T3    20040301    ES 1997-936041          19970703 <--
     CA 2276312            AA    19980709    CA 1997-2276312         19971230 <--
     AU 9856232            A1    19980731    AU 1998-56232           19971230 <--
     EP 952850             A1    19991103    EP 1997-952676          19971230 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
```

JP 2001512329 T2 20010821 JP 1998-530298 19971230 <--
PRIORITY APPLN. INFO.: US 1996-778415 A2 19961231 <--
WO 1997-US11670 A 19970703 <--
US 1996-21212P P 19960703 <--
WO 1997-US24127 W 19971230

AB A method of enhancing the permeability of a biol. membrane, including the skin or mucosa of an animal or the outer layer of a plant, to a permeant is described which utilizes microporation of selected depth and optionally ≥1 of sonic, electromagnetic, mech., and thermal energy and a chemical enhancer. Microporation is accomplished to form a micropore of selected depth in the biol. membrane and the porated site is contacted with the permeant. Addnl. permeation enhancement measures may be applied to the site to enhance the flux rate of a permeant, e.g. a drug, into an organism through the micropores and into targeted tissues within the organism; the parameters of these measures can be tailored to act selectively on specific tissue barriers. Microporation can also be used for minimally invasive or noninvasive monitoring of analytes in **body fluids** by enhancing their outward diffusion to the skin surface. Micropores ≤1000 μm in diameter are produced by ablating the membrane with a heat source, a microlancet, a beam of sonic energy, a high-pressure jet of fluid, a short pulse of electricity, or a short light pulse emitted e.g. by a laser diode and focused on a site treated with a light-absorbing substance to generate heat at the site. The energy source is modulated to minimize sensory perception of the process, e.g. by use of energy pulses alternated with cooling or recovery periods. Pore depth is determined by **measuring** the impedance properties of the tissue. Thus, a small drop of Cu phthalocyanine suspension in iso-PrOH was evaporated on transparent adhesive tape which was then attached to the skin of a volunteer and irradiated with pulsed laser light to produce a pore in the stratum corneum extending to the epidermis. **Interstitial fluid** (5 μL) collected from the pore was analyzed for glucose with a glucometer in normal and diabetic subjects. The average temporal lag between blood and **interstitial fluid glucose levels** in response to a glucose load was only 6.2 min; an equation relating blood and **interstitial fluid glucose levels** is presented. In another experiment, a solution containing lidocaine and a permeation enhancer was applied to a grid of similarly produced micropores in the skin to produce numbness; permeation was further increased by application of ultrasound through a transducer.

L32 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:557678 HCAPLUS
DOCUMENT NUMBER: 127:187845
TITLE: Disposable glucose biosensor
INVENTOR(S): Goto, Masao; Mure, Hiroki
PATENT ASSIGNEE(S): NOK Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09210948	A2	19970815	JP 1996-37483	19960131 <--

PRIORITY APPLN. INFO.: JP 1996-37483 19960131 <--

AB The title biosensor, useful in **measuring** blood and **urinary** sugar **level** or in controlling **glucose**

concentration in food manufacture, comprises an active electrode having a layer containing
oxidoreductase and an electron acceptor, and a counter electrode formed on an insulated base board. The biosensor is easily prepared and has appropriate accuracy. Glucose was determined by a disposable biosensor having glucose oxidase and K3Fe(CN)6 immobilized on C electrode with good linearity at 0-1000 mg/dL.

L32 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:483424 HCAPLUS
DOCUMENT NUMBER: 127:106142
TITLE: A flow injection microdialysis sampling **chemiluminescence** system for in vivo online monitoring of glucose in intravenous and subcutaneous tissue fluid microdialyzates
AUTHOR(S): Fang, Qun; Shi, Xiao-Tong; Sun, Yu-Qing; Fang, Zhao-Lun
CORPORATE SOURCE: Shenyang Pharmaceutical University, Shenyang, 110015, Peop. Rep. China
SOURCE: Analytical Chemistry (**1997**), 69(17), 3570-3577
CODEN: ANCHAM; ISSN: 0003-2700
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel flow injection online microdialysis system for in vivo monitoring of glucose in s.c. tissue fluid and blood is described. An implantable loop-type microdialysis probe was used for s.c. sampling, and a flow-through microdialyzer was used for i.v. sampling by pumping of the blood from the tested rabbit through the microdialyzer located outside the living system at a flow rate of 10 μL/min. The perfusion rate of the dialyzate was 20 μL/min. The glucose in the dialyzate was detected online with a flow injection **chemiluminescence** system after passing through an immobilized glucose oxidase reactor. The calibration of the detector system (including reactor) and monitoring of baseline drifts were performed simultaneously to improve the reliability of the monitoring process. The dialyzate sample volume was 20 μL, and the sample throughput was 28 h-1. The variation of **glucose level** in s.c. tissue fluid and blood of the rabbits was monitored after the administration of glucose or insulin to demonstrate the favorable resolution and reliability of the system for in vivo online monitoring.
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:299631 HCAPLUS
DOCUMENT NUMBER: 122:75658
TITLE: Implantable electrocatalytic glucose sensor
AUTHOR(S): Lager, W.; Lucadou, I. v.; Nischik, H.; Nowak, T.; Preidel, W.; Ruprecht, L.; Stanzel, M. J.; Tegeder, V.
CORPORATE SOURCE: Corporate Research Development, Siemens AG, Erlangen, Germany
SOURCE: Hormone and Metabolic Research (**1994**), 26(11), 526-30
CODEN: HMMRA2; ISSN: 0018-5043
PUBLISHER: Thieme
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An electrocatalytic glucose sensor for in vivo application was developed to determine the **glucose level** in blood and further to control the insulin dosage in a closed loop system for diabetes therapy. The principle of the electrocatalytic glucose sensor is based on the direct **electrochem.** oxidation of glucose at a membrane-covered platinum electrode. For possible clin. application the sensor was built as a catheter. Implantations in the vena cava of sheep demonstrated the potential feasibility of the sensor. The sensor values were simultaneously checked by the enzymic anal. of glucose in blood samples drawn sep. from a femoral vein. It was possible to determine the glucose concentration in sheep for >130 days with tolerable deviations from glucose reference measurements. The mean error was 2.5 mmol/L. One of the catheters was explanted after 211 days and histol. examination revealed good biocompatibility of all materials used. In addnl. expts., the differences of the glucose concentration in vena cava as well as in the anterior and posterior femoral veins of a sheep were examined **during** glucose tolerance tests. These expts. verified the method of in vivo calibration of the long-term implantable glucose sensor.

L32 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:599929 HCAPLUS
DOCUMENT NUMBER: 121:199929
TITLE: A new method of quantitating serum and **urinary** levels of 1,5-anhydroglucitol in insulin-dependent diabetes mellitus
AUTHOR(S): Namba, Naoki; Watanabe, Fusao; Tokuda, Masakuni; Mino, Makoto; Furuya, Eisuke
CORPORATE SOURCE: Department Pediatrics, Osaka Medical College, Takatsuki, 569, Japan
SOURCE: Diabetes Research and Clinical Practice (**1994**), 24(1), 55-61
CODEN: DRCPE9; ISSN: 0168-8227
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new method was developed for quantitating the serum and **urinary** levels of 1,5-anhydroglucitol (AG), a sensitive and informative marker of glycemic control. This method utilized a combination of ODS and pyranose oxidase immobilized columns for HPLC, and monitored hydrogen peroxide production with an **electrochem.** detector. We applied this method to determine the serum and **urinary** AG levels in 15 patients with insulin-dependent diabetes mellitus (IDDM) as well as in control subjects. Baseline separation of AG from other sugars such as glucose and myoinositol was achieved. Quantitation of AG was achieved over the range from 0.2 ng to 0.3 μg based upon peak heights. The serum and **urinary** AG levels in the IDDM patients were 4.4 ± 8.3 mg/l and 5.1 ± 4.3 mg/day, resp. We found that the **urinary** AG to serum AG ratio showed a linear correlation with the **urinary glucose level** in the IDDM patients (**urinary** glucose (y) vs. **urinary** AG to serum AG ratio (x): $y = 9.071x - 0.991$; $r = 0.968$, $P < 0.001$). This method proved efficient and reliable for quantitating **urinary** AG. Since determination of both the AG and **glucose levels** in **urine** gives equivalent clin. information to the serum AG level, **urinary** monitoring could provide a valuable addition to the available methods for assessing the glycemic status of IDDM patients.

L32 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:101277 HCAPLUS
DOCUMENT NUMBER: 120:101277
TITLE: Method for **measuring** glucose in **body fluids** using an **electrochemical** sensor
INVENTOR(S): Wong, David K.
PATENT ASSIGNEE(S): VIA Medical Corp., USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5271815	A	19931221	US 1991-814099	19911226 <--
PRIORITY APPLN. INFO.:			US 1991-814099	19911226 <--

AB This invention provides an **electrochem.** sensor capable of **measuring** the **glucose level** of **body fluids**, especially blood. More particularly, this invention also relates to the use of such a glucose sensor in an automated bedside blood chemical system which facilitates the operation of the sensor. A sensor using O partial pressure as an indirect measurement of glucose concentration is contacted with an O-containing low-glucose solution until a baseline sensor output is obtained. Then the sensor is contacted with the **body fluid** sample until glucose saturation of the sensor is reached. The sensor is removed from the sample and contacted again with the low-glucose solution The time required for the sensor output to reach a fixed level compared to the baseline sensor output is measured and compared with a calibration time-to-recover. A polarog. O electrode assembly having a Pt working electrode and a Ag/AgCl counter electrode was placed in a flow cell and coated with a gel mixture of glucose oxidase, human serum albumin, polyvinyl alc., and glutaraldehyde. The resulting glucose sensor was connected to a monitor which consisted of a reversible peristaltic i.v. infusion pump. The baseline fluid was an air-saturated physiol. saline solution

L32 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:72748 HCAPLUS
DOCUMENT NUMBER: 120:72748
TITLE: Mediated glucose biosensor based on polyvinylferrocene
AUTHOR(S): An Lac Nguyen; Luong, John H. T.
CORPORATE SOURCE: Biotechnol. Res. Inst., Natl. Res. Counc., Montreal, QC, H4P 2R2, Can.
SOURCE: Applied Biochemistry and Biotechnology (**1993**), 43(2), 117-32
CODEN: ABIBDL; ISSN: 0273-2289
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polyvinylferrocene (PVF) was **electrochem.** deposited on platinum and carbon electrodes to form a stable and resilient film. **During** cyclic voltammetry in phosphate buffer, the PVF film deposited on carbon electrodes exhibited anodic and cathodic peaks at 214 and 68 mV, resp. Both types of electrodes, bearing electrodeposited PVF and crosslinked glucose oxidase, were responsive to glucose, but the carbon electrode appeared to provide a faster response and could determine glucose between 0.1 and 8 mM. When protected by a layer of polymer **electrochem.** formed from resorcinol and phenylenediamine, the mediated biosensors based

on PVF-deposited carbon electrodes were capable of determining glucose up to 25 mM with a response time of 1 min, for at least 50 repeated analyses with good reproducibility. The presence of ambient oxygen, ascorbic acid (0.1 mM), and uric acid (0.5 mM) did not affect their performance. When applied for the determination of the **glucose level** in reconstituted human serum, the results agreed well with those of the reference hexokinase assay.

L32 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:534641 HCAPLUS
DOCUMENT NUMBER: 119:134641
TITLE: Novel FIA **chemiluminescence** fiber optic biosensor for **urinary** and blood glucose
AUTHOR(S): Cattaneo, M. V.; Luong, J. H. T.
CORPORATE SOURCE: Biotechnol. Res. Inst., Natl. Res. Counc. Canada, Montreal, QC, H4P 2R2, Can.
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (**1993**), 1886(Proceedings of Fiber Optic Sensors in Medical Diagnostics, 1993), 186-92
CODEN: PSISDG; ISSN: 0277-786X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A **chemiluminescence** fiber-optic biosensor system coupled to flow-injection anal. (FIA) was developed to measure glucose in **body fluids.** Glucose oxidase was immobilized on a preactivated nylon membrane and attached to the tip of a fiber-optic bundle. This enzyme acted on β-D-glucose to produce hydrogen peroxide which was then reacted with luminol in the presence of ferricyanide to produce a light signal. The sensitivity of the biosensor was 32 ± 0.65 nV/μM with a min. detectable level of 5 μM. The addition of a glucose oxidase column with a higher enzyme loading improved the sensitivity by at least 25-fold thus permitting the measurement of the lower **glucose levels** found in **urine.** The enzyme membrane could be reused for at least 50 analyses while the glucose oxidase column could be reused for over 500 analyses without losing the original activity. Endogenous ascorbate and urate usually present in **urine** samples which interfere with the **chemiluminescence** signal were effectively retained by an upstream ion-exchange column. When applied for the determination of **urinary** and blood **glucose levels**, the results obtained compared well with those of the widely accepted hexokinase assay.

L32 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:467033 HCAPLUS
DOCUMENT NUMBER: 119:67033
TITLE: Development of noninvasive glucose sensor by electrogenerated **chemiluminescence** for clinical applications
AUTHOR(S): Yoshimi, Yasuo; Himi, Naoyuki; Kanamori, Toshiyuki; Sakai, Kiyotaka
CORPORATE SOURCE: Dep. Chem. Eng., Waseda Univ., Tokyo, 169, Japan
SOURCE: Biochem. Eng. 2001, Proc. Asia-Pac. Biochem. Eng. Conf. (**1992**), 629-32. Editor(s): Furusaki, Shintaro; Endo, Isao; Matsuno, Ryuichi. Springer: Tokyo, Japan.
CODEN: 58ZEAK
DOCUMENT TYPE: Conference
LANGUAGE: English

AB The objective of the present study is to conduct **electrochemiluminescence** (ECL) on the surface of an electrode set up at a constant potential without catalyst and to produce sensitive and stable glucose sensor. Sensitive and stable measurements of glucose concentration by ECL with luminol are a promising technique of noninvasively determining glucose in blood from glucose concentration data of sweat and are applicable to a glucose sensor.

L32 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:250915 HCAPLUS
DOCUMENT NUMBER: 118:250915
TITLE: On-line **chemiluminescence** assay using FIA and fiber optics for **urinary** and blood glucose
AUTHOR(S): Cattaneo, M. V.; Luong, J. H. T.
CORPORATE SOURCE: Biotechnol. Res. Inst., Natl. Res. Counc. Canada, Montreal, QC, Can.
SOURCE: Enzyme and Microbial Technology (**1993**), 15(5), 424-8
CODEN: EMTED2; ISSN: 0141-0229
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A **chemiluminescence** fiber optic system coupled to flow injection anal. (FIA) and ion exchange chromatog. has been developed for determining glucose in blood and **urine.** Immobilized glucose oxidase acted on β-D-glucose to produce hydrogen peroxide, which was then reacted with luminol in the presence of ferricyanide to produce a light signal. Endogenous ascorbic acid and uric acid present in **urine** or blood samples were effectively retained by an upstream acetate anion exchanger. In addition, acetaminophen could also be adsorbed by this ion exchanger. The detection system exhibited a sensitivity of 1.315 RU μM-1 for glucose with a min. detection level of 1 μM. When applied for the determination of **urinary** and blood **glucose levels**, the results obtained compared well with those of the reference hexokinase assay. Immobilized glucose oxidase was reused for over 500 analyses without losing its original activity. A conservative estimate for the reuse of the acetate ion exchange column was about 100 analyses.

L32 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:445683 HCAPLUS
DOCUMENT NUMBER: 115:45683
TITLE: Process and pulsed alternating voltage enzyme electrode sensor for **measuring** the **glucose content** of **glucose**-containing fluids under anaerobic conditions
INVENTOR(S): Kuypers, Martinus Henricus; Steeghs, Gerardus Fransiscus Jozef
PATENT ASSIGNEE(S): PPG Hellige B. V., Neth.
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 396788	A1	19901114	EP 1989-108264	19890508 <--

R: AT, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE

PRIORITY APPLN. INFO.: EP 1989-108264 19890508 <--
AB Glucose is measured in liquid media, especially blood under anaerobic conditions,
using an **electrochem.** sensor operated with a pulsed alternating voltage switchable between a higher operating voltage level (A), at which excess O is released at the working electrode and into the surrounding immobilized glucose oxidase by way of **electrochem.** splitting H2O, and a lower operating voltage (B), at which only the catalytic glucose reaction in glucose oxidase takes place to form H2O2 which oxidizes at the working electrode. The current flowing thereby is determined as the value sensed in the phase of low operating voltage level B and is evaluated as a measure of glucose concentration Other embodiments and diagrams of the sensors are given.

L32 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1986:530098 HCAPLUS
DOCUMENT NUMBER: 105:130098
TITLE: Use of a reversibly immobilized enzyme in the flow injection-amperometric determination of picomole **glucose levels**
AUTHOR(S): Lomen, Catherine E.; De Alwis, Uditha; Wilson, George S.
CORPORATE SOURCE: Dep. Chem., Univ. Arizona, Tucson, AZ, 85721, USA
SOURCE: Journal of the Chemical Society, Faraday Transactions 1: Physical Chemistry in Condensed Phases (**1986**), 82(4), 1265-70
CODEN: JCFTAR; ISSN: 0300-9599
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A reversibly immobilized enzyme (glucose oxidase EC 1.1.3.4) reactor coupled to a continuous flow system is used to determination serum glucose. The
soluble enzyme is first covalently attached to an antibody. This conjugate is then introduced into a microreactor containing an immobilized antigen. The resulting immunol. reaction produces an immobilized enzyme. Injection of glucose yields H2O2, which is detected **electrochem.** The reactor can be regenerated in the event of a loss of enzyme activity to within ±3% of the original activity in <30 min by eluting the immobilized enzyme and reacting a fresh aliquot of the enzyme-labeled antibody with the same reactor. The lifetime of the reactor is >1 yr, **during** which time the antigen remains active in binding. The sample throughput is .apprx.20-30 samples/h and the accuracy is in the order of ±3%. The linear dynamic range for glucose is 0.01-10 mg/cm for a sample size of 20 mm3.

L32 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:547303 HCAPLUS
DOCUMENT NUMBER: 101:147303
TITLE: Apparatus for continuous glucose determination in blood.
PATENT ASSIGNEE(S): Nikkiso Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 59125052	A2	19840719	JP 1982-231910	19821229 <--
JP 02062817	B4	19901226		

PRIORITY APPLN. INFO.: JP 1982-231910 19821229 <--

AB Gas, e.g., air (1/2-2 volume of sample) is introduced to partitioning blood flow and the glucose is determined by a electrode system consisting of a glucose oxidase immobilized membrane, and Ag cathode and Pt anode (area ratio = 3:1) to detect the produced H2O2. By this way, errors due to high **glucose content** and electrode contamination problems are eliminated. For example, when the continuous flow of blood containing glucose was partitioned by introducing air, the concentration measurements were stable up to 180 min, however, without air partitioning, the concentration was continuously decreased to 10-15% **during** the 180-min period. And, when the area ratio of Ag and Pt electrode surface was >3, it showed actual glucose concentration, however, when the ratio was <3, the output signal was lower than that for actual glucose concentration

L32 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:416277 HCAPLUS
DOCUMENT NUMBER: 91:16277
TITLE: Apparatus and methods for determining the **glucose content** of liquid samples
INVENTOR(S): Muramatsu, Kozo; Samizo, Kuniko
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
SOURCE: Ger. Offen., 36 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2845820	A1	19790426	DE 1978-2845820	19781020 <--
JP 54060996	A2	19790516	JP 1977-127102	19771022 <--
US 4260680	A	19810407	US 1978-949130	19781006 <--
FR 2406825	A1	19790518	FR 1978-29941	19781020 <--
FR 2406825	B1	19820423		
GB 2009937	A	19790620	GB 1978-41411	19781020 <--
GB 2009937	B2	19820324		

PRIORITY APPLN. INFO.: JP 1977-127102 A 19771022 <--

AB Methods and apparatus are described for the single and rapid determination of glucose in liquid samples, especially blood serum or **urine**, by 1st pretreating a sample with ≥1 ion exchanger to remove undesirable reaction-inhibiting components and then reacting the sample with glucose oxidase and **measuring** the H2O2 which is formed with a suitable electrode. For determination of serum glucose, an apparatus is used that comprises: an automatic sampling device; sep. tubing but common controlling pump for sample, buffer, and air; sep. columns filled with anion exchanger (Diaion PA 310, Cl- form), cation exchanger (Amberlite 200, Na+ form), and immobilized glucose oxidase; air outlet; detection electrodes; **measuring** cell (amperometric detection device; a resistance; recording amperometer; and a waveform generator. Serum **glucose levels** determined by this apparatus compared well with those obtained by a common enzymic colorimetric method. Procedures for glucose oxidase

immobilization as well as diagrams of other devices for glucose determination are presented.

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=> d que stat l31
L19           2 SEA FILE=REGISTRY ABB=ON  GLUCOSE/CN
L20           1 SEA FILE=REGISTRY ABB=ON  HEMOGLOBIN/CN
L21         757 SEA FILE=HCAPLUS ABB=ON  ?BLOOD?(W)?ANALYSIS? AND (?GLUCOSE?
                OR L19)(3A)(?CONTENT? OR ?LEVEL?)
L22         261 SEA FILE=HCAPLUS ABB=ON  L21 AND (?HAIR? OR ?URIN? OR (?BODY?
                OR ?INTERSTITIAL?)(W)?FLUID?)
L23           1 SEA FILE=HCAPLUS ABB=ON  L22 AND (L20 OR ?HEMOGLOBIN? OR
                RED?)(W)?LEVEL?
L24          21 SEA FILE=HCAPLUS ABB=ON  L22 AND (?LUMINESC? OR ?FLUORESENC?
                OR ?ELECTROCHEM?)
L25          22 SEA FILE=HCAPLUS ABB=ON  L23 OR L24
L26           3 SEA FILE=HCAPLUS ABB=ON  L25 AND ?TEST?(W)(KIT? OR ?STRIP?)
L27           0 SEA FILE=HCAPLUS ABB=ON  L25 AND ?HAIR?(3A)(?REMOV? OR
                ?DILUENT?)
L28           1 SEA FILE=HCAPLUS ABB=ON  L25 AND ?METABOL?(3A)?INHIBIT?
L29          22 SEA FILE=HCAPLUS ABB=ON  L25 OR L26 OR L27 OR L28
L30           5 SEA L29
L31           5 DUP REMOV L30 (0 DUPLICATES REMOVED)

=> d ibib abs l31 1-5

L31  ANSWER 1 OF 5  EMBASE  COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
     on STN
ACCESSION NUMBER:   2005082468  EMBASE
TITLE:              Manifestations of falciparum malaria in pregnant women of
                    Eastern Sudan.
AUTHOR:             Adam I.; Ali D.M.; Elbashir M.I.
CORPORATE SOURCE:   Dr. I. Adam, Department of Obstetrics/Gynecology, New Halfa
                    Teaching Hospital, PO Box 61, New Halfa, Sudan.
                    ishagadam@hotmail.com
SOURCE:             Saudi Medical Journal, (2004) Vol. 25, No. 12, pp.
                    1947-1950.
                    Refs: 25
                    ISSN: 0379-5284  CODEN: SAMJDI
COUNTRY:            Saudi Arabia
DOCUMENT TYPE:      Journal; Article
FILE SEGMENT:       004     Microbiology
                    010     Obstetrics and Gynecology
                    037     Drug Literature Index
LANGUAGE:           English
SUMMARY LANGUAGE:   English
ENTRY DATE:         Entered STN: 20050303
                    Last Updated on STN: 20050303
AB   Objective: This study was conducted to investigate the morbidity pattern
     of malaria during pregnancy in New Halfa Teaching Hospital,
     Eastern Sudan, where malaria transmission is unstable. Methods: Pregnant
     (or in the puerperium) women presented with symptoms of falciparum malaria
     to the hospital during the period of November 2002 to March 2003
     were enrolled to the study. Their socio-demographic characters, physical
     examinations, especially manifestations of severe falciparum malaria were
     performed and data were recorded. Blood films for malaria, urine
     , hemoglobin and blood glucose were tested. Results: Fifty-nine pregnant
     (or in the puerperium) women with falciparum malaria were presented in
     this study. The mean ± SD gravidity was 3.3 ± 2.1. Fourteen
     (23.7%) out of 59 patients presented with one or more manifestations of
     severe malaria according to the World Health Organization criteria.
     Severe anemia (5), pulmonary edema (4), jaundice (3), hypoglycemia (3) and
     hypotension (1) were the manifestations of the severe illness. In
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comparison to non-severe group, patients with severe illness have significantly higher temperature and significantly lower **hemoglobin level.** The other parameters were not significantly different between the 2 groups of patients. In the severe cases, one patient was presented with missed second trimester abortion and the 6/59 (10.2%) patients delivered prematurely 4 were in the severe form. There were 4 perinatal deaths all in the severe group and there was one maternal death due to pulmonary edema. Conclusion: In this locality not only primigravidae but all parities were infected with falciparum malaria and different manifestations of severity were detected. Higher perinatal mortalities were documented.

L31 ANSWER 2 OF 5 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2004014201 EMBASE
TITLE: Pioglitazone preserves pancreatic islet structure and insulin secretory function in three **murine** models of type 2 diabetes.
AUTHOR: Diani A.R.; Sawada G.; Wyse B.; Murray F.T.; Khan M.
CORPORATE SOURCE: M. Khan, Takeda Pharmaceut. N. America Inc., 475 Half Day Road, Lincolnshire, IL 60069, United States. mkhan@tpna.com
SOURCE: American Journal of Physiology - Endocrinology and Metabolism, (2004) Vol. 286, No. 1 49-1, pp. E116-E122. Refs: 46
ISSN: 0193-1849 CODEN: AJPMD
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040122
Last Updated on STN: 20040122

AB Thiazolidinediones may slow the progression of type 2 diabetes by preserving pancreatic β-cells. The effects of pioglitazone (PIO) on structure and function of β-cells in KKA(y), C57BL/6J ob/ob, and C57BL/KsJ db/db mice (genetic models of type 2 diabetes) were examined. ob/ob (n = 7) and db/db (n = 9) mice were randomly assigned to 50-125 mg.ovrhdot.kg body wt (-1).ovrhdot.day(-1) of PIO in chow beginning at 6-10 wk of age. Control ob/ob (n = 7) and db/db mice (n = 9) were fed chow without PIO. KKA(y) mice (n = 15) were fed PIO daily at doses of 62-144 mg.ovrhdot.kg body wt(-1).ovrhdot.day(-1). Control KKA(y) mice (n = 10) received chow without PIO. Treatment continued until euthanasia at 14-26 wk of age. Blood was collected at baseline (before treatment) and just before euthanasia and was analyzed for glucose, glycosylated hemoglobin, and plasma insulin. Some of the splenic pancreas of each animal was resected and partially sectioned for light or electron microscopy. The remainder of the pancreas was assayed for insulin content. Compared with baseline and control groups, PIO treatment significantly reduced blood **glucose** and glycosylated **hemoglobin levels.** Plasma insulin levels decreased significantly in ob/ob mice treated with PIO. All groups treated with PIO exhibited significantly greater β-cell granulation, evidence of reduced β-cell stress, and 1.5-to 15-fold higher levels of pancreatic insulin. The data from these studies suggest that comparable effects would be expected to slow the progression of type 2 diabetes, either delaying or possibly preventing progression to an insulin-dependent state.

L31 ANSWER 3 OF 5 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1999235470 EMBASE

TITLE: Use of intraosseous blood to assess blood chemistries and hemoglobin **during** cardiopulmonary resuscitation with drug infusions.

AUTHOR: Johnson L.; Kissoon N.; Fiallos M.; Abdelmoneim T.; Murphy S.

CORPORATE SOURCE: N. Kissoon, Univ. of Florida Hlth. Sci. Center, Howard Building, Wolfson Children's Hospital, 820 Prudential Drive, Jacksonville, FL 32207, United States

SOURCE: Critical Care Medicine, (1999) Vol. 27, No. 6, pp. 1147-1152.
Refs: 26
ISSN: 0090-3493 CODEN: CCMDC7

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 024 Anesthesiology

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 19990805
Last Updated on STN: 19990805

AB Objective: To compare intraosseous with central venous blood samples for biochemical analyses and **hemoglobin levels** **during** cardiopulmonary resuscitation (CPR) and **during** cardiopulmonary resuscitation with infusion of sodium bicarbonate, epinephrine, and saline boluses through the intraosseous site. Design: Prospective, complete repeated measures study. Setting: An animal laboratory at a university medical center. Subjects: Thirty-two piglets (mean weight, 30 [range, 24-35] kg). Interventions: Animals were anesthetized, instrumented, and subjected to hypoxic cardiac arrest. An intraosseous cannula was inserted into the tibia, and animals were randomly assigned to one of five groups: heparinized saline (n = 6), epinephrine infusions only (n = 6), saline infusions only (n = 6), sodium bicarbonate infusions only (n = 8), and epinephrine, saline, and sodium bicarbonate infusions through the same site (n = 6). CPR (chest compressions and mechanical ventilation) was performed in all groups. Simultaneous blood samples were taken from the central venous and intraosseous sites before arrest and after 5 and 30 mins of CPR. Measurements and Main Results: There were no differences ($p < .05$) in sodium, potassium, magnesium, lactate, and calcium values of intraosseous and central venous blood at the baseline and **during** 5 mins of CPR with infusions through the intraosseous cannula. At 30 mins, differences were apparent in magnesium, potassium, and sodium values between groups when the intraosseous cannula was used for infusions as well as sampling. Intraosseous potassium, glucose, and magnesium values were lower and sodium values were higher than central venous blood levels. No differences were seen at all sampling intervals if small-volume heparinized saline was given through the intraosseous site. Hemoglobin values were lower in the intraosseous group after 30 mins of CPR and infusions through the intraosseous site. After 30 mins of CPR, all hemoglobin values from the intraosseous site were <10 g/100 mL. Conclusion: Intraosseous and central venous blood biochemical and hemoglobin values were similar **during** hemodynamic stability and throughout 30 mins of resuscitation if no drugs were given through the intraosseous site. However, differences existed after 30 mins of CPR and infusions through the intraosseous site. Laboratory values may be erroneous when intraosseous blood is used **during** periods of resuscitation of >5 mins if drugs and fluid boluses have also been infused

through the site. For reliable values, an intraosseous site for sampling only may be reasonable.

L31 ANSWER 4 OF 5 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 97064275 EMBASE
DOCUMENT NUMBER: 1997064275
TITLE: Post-column enzyme reactors for chemiluminometric detection of glucose, 1,5-anhydroglucitol and 3-hydroxybutyrate in an anion-exchange chromatographic system.
AUTHOR: Kiba N.; Saegusa K.; Furusawa M.
CORPORATE SOURCE: N. Kiba, Department Applied Chem.Biotechnol., Faculty of Engineering, Yamanashi University, Kofu 400, Japan
SOURCE: Journal of Chromatography B: Biomedical Applications, (1997) Vol. 689, No. 2, pp. 393-398.
Refs: 12
ISSN: 0378-4347 CODEN: JCBBEP
PUBLISHER IDENT.: S 0378-4347(96)00334-9
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 970318
Last Updated on STN: 970318

AB A liquid chromatographic system consisting of a co-immobilized 3-hydroxybutyrate dehydrogenase-NADH oxidase reactor and an immobilized pyranose oxidase reactor in series and a chemiluminometer was developed for the simultaneous determination of glucose, 1,5-anhydroglucitol and 3-hydroxybutyrate in plasma. The enzymes were immobilized on toresylated poly(vinyl alcohol) beads. Separation was achieved on a TSK gel SAX column (40x4 mm I.D.) with an eluent of 50 mM NaOH containing 30 mM sodium butyrate. The hydrogen peroxide produced was detected by **measuring** the **chemiluminescence** emitted on admiring with luminol and potassium hexacyanoferrate(III). The calibration curves were linear from 0.8 to 500 μM (7 ng-4 μg) for glucose, from 0.8 to 400 μM (7 ng-3 μg) for 1,5-anhydroglucitol and from 1 to 700 μM (5 ng-4 μg in a 50-μl injection) for 3-hydroxybutyrate. The sample throughput was four per hour. The reactors were stable for at least ten days.

L31 ANSWER 5 OF 5 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 94271154 EMBASE
DOCUMENT NUMBER: 1994271154
TITLE: [Long-functioning β-D-glucose and L-lactate biosensors for continuous flow-through measurements for 'fouling'-resistant and selectivity-optimized serum- and haemoanalysis].
LANGLEBIGE β-D-GLUCOSE- UND L-LACTAT-BIOSENSOREN FUR KONTINUIERLICHE DURCHFLUβMESSUNGEN ZUR,,FOULING'-RESISTENTEN UND SELEKTIVITATSOPTIMIERTEN SERUM- UND HAMOANALYTIK.
AUTHOR: Schindler J.G.; Schindler M.M.; Herna K.; Pohl M.; Guntermann H.; Burk B.; Reisinger E.
CORPORATE SOURCE: Institut Normale Pathol Physiologie, Projekt Bioelektrochemische Sensorik, Philipps-Universitat, Karl-von-Frisch-Strasse 1,D-35033 Marburg-Lahn, Germany

SOURCE: European Journal of Clinical Chemistry and Clinical Biochemistry, (1994) Vol. 32, No. 8, pp. 599-608.
ISSN: 0939-4974 CODEN: EJCBEO
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: German
SUMMARY LANGUAGE: German; English
ENTRY DATE: Entered STN: 940914
Last Updated on STN: 940914

AB **Bioelectrochemical** membrane-electrodes for O2-sensitive enzymatic flow-through analysis of β-D-glucose and L-lactate are described. The enzyme-membranes of the biosensors consist of glucose-oxidase or lactate-oxidase molecules cross-linked with glutardialdehyde between two dialysis membranes. The accuracy of the biosensors is demonstrated by electroanalysis of diluted control serum and compared with redox-mediator-free H2O2 detection and photometric methods. Continuous haemoanalysis of uncoagulated blood was carried out, using an intermediate carrier stream with additive systems. Tangential streaming to the miniaturized dialysis chamber with a circular channel minimizes blockage of the pores of the dialysis membrane by erythrocytes, leukocytes or protein. An oxygenator pump for the exchange of gases between the buffered solution of the intermediate carrier and the surrounding atmosphere guarantees a constant oxygen partial pressure within the carrier stream. The pulsations produced by the oxygenator pump are dampened by a miniature pressure balance chamber with an unsignificant dead space volume for protecting the enzyme membrane of the sensor. Glutardialdehyde inhibits growth of micro-organisms and any resulting oxygen consumption, so that even in protein-containing **measuring** solutions enzyme electrodes can be used without interference from microbial contamination. The **bioelectrochemical measuring** system can therefore also be employed for the electroanalysis of fermentation solutions. For continuous flow-through measurements, it is necessary to change the glucose-oxidase membranes after 100-150 days, and the lactate-oxidase membranes after 3-6 weeks.

Inventor Search

=> d ibib abs ind l17 1-9

L17 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:433891 HCAPLUS
DOCUMENT NUMBER: 140:420345
TITLE: Photometric determination of coagulation time in undiluted whole blood
INVENTOR(S): **Fish, Falk**
PATENT ASSIGNEE(S): Inverness Medical Switzerland G.m.b.H., Switz.
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004044560	A1	20040527	WO 2003-IL958	20031112

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-425300P P 20021112

AB A device, system and method is disclosed for photometric detection of coagulation in whole blood. The present invention is easy to implement and operate. Furthermore, the present invention has the advantage of being considered to fulfill the desired standard of using photometry for measuring blood coagulation. Also, a photometric coagulation test device for whole blood specimens according to the present invention provides medical accuracy to the home user and, at the same time, is simple to construct. The present invention is also useful for detecting and determining blood agglutination, for example as the results of a serol. reaction with an antibody.

IC ICM G01N021-03
ICS G01N021-59; G01N033-49
CC 9-5 (Biochemical Methods)
ST photometric detn coagulation time undiluted blood
IT Phototransistors
(Darlington; photometric determination of coagulation time in undiluted whole blood)
IT Apparatus
(Light guide; photometric determination of coagulation time in undiluted whole blood)
IT Containers
(Reaction; photometric determination of coagulation time in undiluted whole blood)
IT **Analytical** apparatus
(Test strip; photometric determination of coagulation time in undiluted whole blood)

IT Algorithm
Blood analysis
Blood coagulation
Capillarity
Centrifugal force
Containers
Electricity
Electroluminescent devices
Force
Gravity
Hemagglutination
Human
Hydrophilicity
Hydrophobic force
Lasers
Light
Light scattering
Light sources
Medicine
Optical absorption
Optical detectors
Optical reflection
Optical transmission
Osmosis
Osmotic pressure
Photodiodes
Photoelectric devices
Photometers
Photometry
Photomultipliers
Phototransistors
Pressure
Reaction
Samples
Temperature sensors
Test kits
Time
Vacuum
(photometric determination of coagulation time in undiluted whole blood)

IT Antibodies and Immunoglobulins
RL: RCT (Reactant); RACT (Reactant or reagent)
(photometric determination of coagulation time in undiluted whole blood)

IT 9001-26-7, Prothrombin 9002-05-5, Thromboplastin
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(photometric determination of coagulation time in undiluted whole blood)

L17 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:256595 HCAPLUS
DOCUMENT NUMBER: 136:259607
TITLE: Method and kit for the transdermal determination of **analyte** concentration in blood
INVENTOR(S): **Fish, Falk**
PATENT ASSIGNEE(S): Israel
SOURCE: PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002027326	A2	20020404	WO 2001-IL848	20010906
WO 2002027326	A3	20020822		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2001088032	A5	20020408	AU 2001-88032	20010906
EP 1320751	A2	20030625	EP 2001-967664	20010906

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:	IL 2000-138788	A	20000929
	WO 2001-IL848	W	20010906

AB A method is provided for determining the level of an **analyte** in the blood of an individual by measuring the level of the **analyte** in an interstitial fluid or in any other non blood fluid which does not contain red blood cells and adjusting the measurement value by the concentration of at least one reference **analyte.**

IC ICM G01N033-66

CC 9-16 (Biochemical Methods)

ST kit transdermal detn **analyte** concn blood

IT Hand
(finger; method and kit for transdermal determination of **analyte** concentration in blood)

IT Body fluid
(interstitial; method and kit for transdermal determination of **analyte** concentration in blood)

IT **Analytical** apparatus
Blood analysis
Body fluid
Collecting apparatus
Computers
Concentration (condition)
Containers
Electrolytes, biological
Erythrocyte
Fluids
Hand
Human
Interface
Luminescence spectroscopy
Skin
Test kits
(method and kit for transdermal determination of **analyte** concentration in blood)

IT Enzymes, analysis
RL: ANT (Analyte); ANST (Analytical study)
(method and kit for transdermal determination of **analyte** concentration in blood)

IT Reagents

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method and kit for transdermal determination of **analyte** concentration in blood)

IT Permeation enhancers
(skin; method and kit for transdermal determination of **analyte** concentration in blood)

IT 7732-18-5, Water, analysis
RL: AMX (Analytical matrix); ARU (Analytical role, unclassified); ANST (Analytical study)
(method and kit for transdermal determination of **analyte** concentration in blood)

IT 50-99-7, Glucose, analysis 7439-95-4, Magnesium, analysis 7440-70-2, Calcium, analysis 14127-61-8, Calcium ion, analysis
RL: ANT (Analyte); ANST (Analytical study)
(method and kit for transdermal determination of **analyte** concentration in blood)

IT 521-31-3, Luminol 540-38-5, p-Iodophenol 9001-37-0, Glucose Oxidase 9003-99-0, Peroxidase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method and kit for transdermal determination of **analyte** concentration in blood)

L17 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:145112 HCAPLUS
DOCUMENT NUMBER: 132:177744
TITLE: Method and kit for the determination of **analyte** concentration in blood based on determination in non-blood sample
INVENTOR(S): **Fish, Falk**
PATENT ASSIGNEE(S): Israel
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000011469	A1	20000302	WO 1999-IL447	19990819
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
IL 125880	A1	20001121	IL 1998-125880	19980821
AU 9953001	A1	20000314	AU 1999-53001	19990819
EP 1105727	A1	20010613	EP 1999-938497	19990819
EP 1105727	B1	20041124		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002523744	T2	20020730	JP 2000-566674	19990819
AT 283479	E	20041215	AT 1999-938497	19990819
PRIORITY APPLN. INFO.:			IL 1998-125880 A	19980821
			WO 1999-IL447 W	19990819

AB A method is provided for determining the level of an **analyte** in the blood of an individual based on determination of the level of the same **analyte** in a non-blood sample (e.g. urine, saliva and hair) obtained from the individual. The non-blood sample contains red blood cells and the volume of the blood in the sample together with the amount of the **analyte** in the sample are the basis for calculating the level of the **analyte** in the individual's blood. Kits for carrying out the above method are also provided. Glucose and Hb calibration values were obtained from testing diluted standard glucose and Hb solns. using a Sigma Chems. colorimetric glucose test kit and a Pierce PowerSignal ELISA Chemiluminescent assay. A calibration equation is derived and used in the determination of the level of glucose and Hb in a hair follicle sample.

IC ICM G01N033-50
ICS G01N033-66; G01N033-72

CC 9-16 (Biochemical Methods)

ST blood **analyte** detn nonblood sample; hair follicle blood glucose Hb detn; test kit blood **analyte** body sample

IT Hemolysis
(agent for; method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT Mucins
RL: MSC (Miscellaneous)
(agents for removing or breaking down, in saliva sample; method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT Body fluid
Hair
Saliva
(**anal.** of; method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT **Analytical** apparatus
(biochem.; method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT Hair
(follicle, **anal.** of; method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT Reagents
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(in test strip; method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT Metabolism, animal
(inhibitors of, for preventing glucose use by living cells in sample; method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT Body fluid
(interstitial, of hair, **anal.** of; method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT Blood analysis
Erythrocyte
Test kits
Urine analysis
(method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT Hemoglobins
RL: ANT (Analyte); ANST (Analytical study)
(method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)

IT 50-99-7, D-Glucose, analysis
RL: ANT (Analyte); ANST (Analytical study)
(method and kit for determination of **analyte** concentration in blood based on determination in non-blood sample)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:420736 HCAPLUS
DOCUMENT NUMBER: 122:182735
TITLE: Apparatus for dry chemical analysis of fluids
INVENTOR(S): **Fish, Falk**
PATENT ASSIGNEE(S): Orgenics Ltd., Israel
SOURCE: U.S., 7 pp. Cont.-in-part of U.S. Ser. No. 816,280, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5389338	A	19950214	US 1993-101965	19930804
IL 96887	A1	19960804	IL 1991-96887	19910106
PRIORITY APPLN. INFO.:			IL 1991-96887 A	19910106
			US 1992-816280 B2	19920103

AB Apparatus is proposed for dry chemical **anal.** of fluids, e.g., blood, that comprises a filter, a filter holder apparatus including a base member defining a filter supporting location and a filter retaining apparatus including a mesh arranged to retain the filter at the filter supporting location in spaced relation with respect to the mesh.
IC ICM G01N033-00
ICS G01N021-00
INCL 422058000
CC 9-1 (Biochemical Methods)
ST blood analysis dry chem filter app; body fluid analysis filter app
IT Blood analysis
Body fluid
Filters and Filtering materials
Polymer-supported reagents
(filter apparatus for dry chemical **anal.** of blood and other fluids)
IT Plastics
RL: DEV (Device component use); USES (Uses)
(hydrophilic; filter apparatus for dry chemical **anal.** of blood and other fluids)

L17 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:542545 HCAPLUS
DOCUMENT NUMBER: 117:142545
TITLE: Filter apparatus for dry analysis of fluids
INVENTOR(S): **Fish, Falk**
PATENT ASSIGNEE(S): Orgenics International Holdings B.V., Neth.
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9212425	A1	19920723	WO 1992-NL2	19920106
W: JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
IL 96887	A1	19960804	IL 1991-96887	19910106
EP 565594	A1	19931020	EP 1992-902939	19920106
EP 565594	B1	19950607		
R: CH, DE, ES, FR, LI, NL				
JP 06504621	T2	19940526	JP 1992-503110	19920106
JP 2958115	B2	19991006		
ES 2073285	T3	19950801	ES 1992-902939	19920106
PRIORITY APPLN. INFO.:			IL 1991-96887 A	19910106
			WO 1992-NL2 W	19920106

AB Apparatus for dry **anal.** of fluids comprises a filter, a filter-holder apparatus including a base member defining a filter-supporting location and a filter-retaining apparatus including a mesh arranged to retain the filter at the filter supporting location in spaced relationship with respect to the mesh.

IC ICM G01N033-52

CC 79-2 (Inorganic Analytical Chemistry)

ST filter app dry analysis fluid; fluid dry analysis filter app

IT Filters and Filtering materials
(apparatus comprising, for dry **anal.** of fluids)

IT Analysis
(dry, of fluids, filter apparatus for)

L17 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:420540 HCAPLUS

DOCUMENT NUMBER: 111:20540

TITLE: Reversed competitive solid phase immunoassay for detecting single-epitope **analytes** and kit therefor

INVENTOR(S): **Fish, Falk**

PATENT ASSIGNEE(S): Orgenics Ltd., Israel

SOURCE: Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 296036	A2	19881221	EP 1988-401425	19880610
EP 296036	A3	19910529		
R: BE, DE, ES, FR, GB, IT, NL				
JP 01221665	A2	19890905	JP 1988-149162	19880615
PRIORITY APPLN. INFO.:			IL 1987-82873 A	19870615

AB The present invention relates to a solid-phase competitive immunoassay method for detecting (single-epitope) **analytes**, comprising: (a) coating a surface with antibodies against the **analyte** to be determined; (b) contacting the coated surface with an aqueous sample containing the **analyte** to be analyzed and with a conjugate of the **analyte** with a carrier so as to effect binding between (i) the antibodies and the **analyte**, and (ii) the antibodies and the **analyte**-carrier conjugate; (c) removing the solution containing antibody-**analyte** and

antibody-conjugate complexes; and (d) measuring the amount of **analyte**-carrier conjugate remaining in the solution of step (c) to indicate the amount of the **analyte** in the sample. Two assay kits are designed.

IC ICM G01N033-543
ICS G01N033-58
CC 9-10 (Biochemical Methods)
ST solid phase competitive immunoassay
IT Dyes
Antigens
RL: ANST (Analytical study)
(conjugates with **analyte**, in reversed competitive solid-phase immunoassay)
IT Ligands
Receptors
RL: ANST (Analytical study)
(for carrier-**analyte** conjugate, in reversed competitive solid-phase immunoassay)
IT Antibodies
RL: ANST (Analytical study)
(to carrier-**analyte** conjugate, in reversed competitive solid-phase immunoassay)
IT Immunochemical analysis
(competitive immunoassay, single-epitope **analytes** detection by)
IT Carbohydrates and Sugars, compounds
Monosaccharides
Nucleotides, compounds
Peptides, compounds
Polysaccharides, compounds
Vitamins
RL: ANST (Analytical study)
(conjugates, with **analyte**, in reversed competitive solid-phase immunoassay)
IT Oligosaccharides
RL: ANST (Analytical study)
(di-, conjugates, with **analyte**, in reversed competitive solid-phase immunoassay)
IT Nucleotides, polymers
RL: ANST (Analytical study)
(poly-, conjugates, with **analyte**, in reversed competitive solid-phase immunoassay)

L17 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:493397 HCAPLUS
DOCUMENT NUMBER: 107:93397
TITLE: Phase variation in Bordetella pertussis is accompanied by changes in DNA modification
AUTHOR(S): Goldman, Sarah; Navon, Yehudit; **Fish, Falk**
CORPORATE SOURCE: Fac. Life Sci., Tel Aviv Univ., Tel Aviv-Jaffa, 69978, Israel
SOURCE: Microbial Pathogenesis (1987), 2(5), 327-38
CODEN: MIPAEV; ISSN: 0882-4010
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pathogenic strains of B. pertussis tend to undergo a phase variation process when propagated in vitro. The phase variants do not express part or all of the virulence factors of the pathogenic strain and are phenotypically stable. In an attempt to characterize the mol. changes

accompanying phase variation, chromosomal DNA, isolated from B. pertussis and its variants, was digested with a variety of restriction enzymes followed by agarose gel electrophoresis. While variant DNA was digested by all tested enzymes, pathogenic strain DNA was not digested by part of the enzymes, thus suggesting modification of the DNA at specific sites. DNA isolated from reversible, growth medium-induced variants demonstrated sensitivity to digestion identical to that of spontaneous, stable variants. **Anal.** of the restriction sequences of all the enzymes which did not digest DNA from pathogenic strains failed to reveal any common sequence known to be affected by methylation. HPLC and nearest-neighbor **anal.** showed a 2-fold increase in the level of DNA methylation in the pathogenic strain. It was concluded that (a) the chromosomal DNA in virulent strains of B. pertussis is protected against enzymic digestion by an as yet unknown modification and (b) variation in B. pertussis may be caused by changes in the modification of the DNA rather than by mutation.

CC 10-6 (Microbial Biochemistry)

ST Bordetella DNA modification phase variation virulence; methylation DNA Bordetella phase variation virulence

IT Bordetella pertussis
(DNA modification and phase variation in, virulence in relation to)

IT Deoxyribonucleic acids
RL: BIOL (Biological study)
(methylation and modification of, in Bordetella pertussis, phase variation and virulence in relation to)

IT Methylation
(of DNA, in Bordetella pertussis, phase variation and virulence in relation to)

IT Microbial virulence
(of Bordetella pertussis, DNA modification and phase variation in)

L17 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:420349 HCAPLUS

DOCUMENT NUMBER: 107:20349

TITLE: System for solid-phase immunological determination

INVENTOR(S): **Fish, Falk**; Herzberg, Max; Ritterband, Menachem

PATENT ASSIGNEE(S): Orgenics Ltd., Israel

SOURCE: Fr. Demande, 49 pp.
CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2573872	A1	19860530	FR 1985-17533	19851127
FR 2573872	B1	19881014		
JP 61181965	A2	19860814	JP 1985-263948	19851126
JP 08023558	B4	19960306		
IL 77144	A1	19910415	IL 1985-77144	19851126
US 5126276	A	19920630	US 1987-113395	19871019

PRIORITY APPLN. INFO.: US 1984-675439 A 19841127

AB A durable and storable recording system is described for quant. and/or qual. determination of an **analyte.** It comprises a solid support on which several receptors are bound, ≥2 of which are conjugated to the same **analyte.** The system can be used to detect nucleic acids, antigens, and antibodies.

IC ICM G01N033-53
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 15
ST immunol detn solid phase; nucleic acid detn system; antigen detn system; antibody detn system
IT Antibodies
Antigens
Nucleic acids
RL: ANST (Analytical study)
(solid-phase immunol. determination of, system for)
IT Immunochemical analysis
(solid-phase recording system for)

L17 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1986:203488 HCAPLUS
DOCUMENT NUMBER: 104:203488
TITLE: Method and apparatus for assaying with optional reagent quality control
INVENTOR(S): Herzberg, Max; **Fish, Falk**
PATENT ASSIGNEE(S): Orgenics Ltd., Israel
SOURCE: Eur. Pat. Appl., 72 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 171150	A2	19860212	EP 1985-304197		19850612
EP 171150	A3	19870701			
EP 171150	B1	19920325			
EP 171150	B2	19980902			
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE					
IL 75464	A1	19900831	IL 1985-75464		19850610
JP 61082166	A2	19860425	JP 1985-129103		19850612
ES 544079	A1	19870116	ES 1985-544079		19850612
AT 74210	E	19920415	AT 1985-304197		19850612
PRIORITY APPLN. INFO.:			US 1984-619739	A	19840612
			EP 1985-304197	A	19850612

AB A solid-phase immunoassay system and method are described for the detection and measurement of multiple **analytes** (proteins, nucleic acids, carbohydrates, polysaccharides, lipids) simultaneously in a single sample. The system comprises a solid support having multiple species of impregnated receptors (e.g., antigen, antibody); a signal-producing system consisting of a labeled probe (e.g., peroxidase-labeled antibody) to bind to the **analyte**, or an unlabeled probe and a labeled anti-probe; a quality control system for monitoring the assay components; and (when probe binding is detected by a color reaction) a standard color scale which is developed similarly during the assay to provide quant. data. An apparatus is also described with different compartments for various stages of the assay (e.g., incubation, wash, etc.).
IC ICM G01N033-543
CC 9-2 (Biochemical Methods)
ST immunoassay solid phase **analyte**
IT Carbohydrates and Sugars, analysis
Ligands
Lipids, analysis

Nucleic acids
Polysaccharides, analysis
Proteins
RL: ANT (Analyte); ANST (Analytical study)
(determination of, by solid-phase immunoassay, quality control in relation to)

IT Antibodies
Antigens
Receptors
RL: ANST (Analytical study)
(in solid-phase immunoassay, quality control in relation to)

IT Quality control
(of reagents in solid-phase immunoassay)

IT Immunochemical analysis
(immunoassay, solid-phase system for, quality control in relation to)

IT 7722-84-1, uses and miscellaneous
RL: USES (Uses)
(peroxidase-labeled probe detection with iodide and starch and, in solid-phase immunoassay)

IT 9005-25-8, uses and miscellaneous
RL: USES (Uses)
(peroxidase-labeled probe detection with iodide and, in solid-phase immunoassay)

IT 7681-11-0, uses and miscellaneous
RL: USES (Uses)
(peroxidase-labeled probe detection with starch and, in solid-phase immunoassay)

IT 9031-11-2 16655-63-3 9001-37-0 9003-99-0
RL: ANST (Analytical study)
(solid-phase immunoassay probe labeling with)